July 1965

FEDERAL RESERVE BANK OF ST. LOUIS

Review

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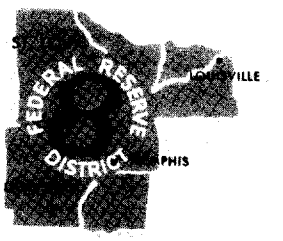

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FEDERAL RESERVE BANK OF ST. LOUIS

P.O. Box 442, St. Louis, Mo. 63166

Economic Expansion Has Moderated

THE PACE OF ECONOMIC ADVANCE appears to have slowed somewhat since February, after a very rapid and probably unsustainable increase during the winter. From a somewhat longer viewpoint, the expansion in economic activity since last September has been a continuation of the rapid pace which has prevailed since mid-1963. Both consumer and wholesale prices have risen since the end of last year.

The money supply has risen only moderately since last November, compared with a 4 per cent average annual rate of expansion over the previous 26 months. There has been some moderation since April in the rate of increase in commercial bank credit (loans and investments), compared with the marked expansion earlier this year. Yields on short-term Treasury bills have declined somewhat since February, offsetting some of the rise from last November to February. Interest rates on most other short-term debt instruments and on long-term bonds have remained about unchanged or have continued to rise moderately.

Problems of Short-Run Analysis

As recent experience illustrates, indicators of economic activity typically move at an uneven pace over short periods of time. Since an analyst of current economic trends is interested primarily in detecting changes in fundamental, underlying economic

movements as quickly and as reliably as possible, fluctuations of economic measures pose several problems for assessing the state of the economy during brief periods of time.

Fluctuations in data may result from any of a multitude of causes. Some movements occur regularly with the calendar (such as increases in retail sales before Christmas) or because of the changing seasons (e.g., greater use of air conditioning equipment in summer). These seasonal variations in data tend to obscure the fundamental movements over periods of less than a year. The task of making proper allowances for seasonal variations is difficult, especially when the seasonal pattern is changing, and, hence, month-to-month changes of "seasonally adjusted" data should be interpreted cautiously.

Strong irregular movements in the economy (such as those caused by strikes, weather, and sales promotions) also distort the data, further obscuring the underlying movements. In analyzing current data there is a further problem: the first figures released are usually based on preliminary observations and are frequently revised as more information becomes available. Because of these problems it is not advisable to rely completely on one- or two-month movements in data; rather, trends over several periods of varying lengths should be considered.

In order to place observed economic movements during a given period in perspective, it is useful to compare these movements to those of some other periods, which may be of different time spans. Such analyses present a further problem. Whenever periods of varying lengths of time are examined, meaningful comparisons cannot be made by calculating changes measured in terms of dollars, physical units, or percentage changes.

Use of Rate-of-Change Triangles

The accompanying tables, "rate-of-change triangles," illustrate a device useful in view of the above mentioned problems for analyzing trends in economic activity. Table I presents a triangle of monthly annual-rate-of-change data for the money supply, and Table II, a triangle of yearly rates of change. Table III presents a triangle of yearly rates of change of payroll employment.

With reference to Table I, each entry is the annual rate of change in money (seasonally adjusted) from an initial month (listed across the top) to a terminal month (listed on the left side). Since the data are standardized on an annual-rate-of-change basis, they may be compared between periods of different lengths of time.

Rate-of-change triangles may be used in several ways for analyzing current economic developments. For example, in Table I the terms in the diagonal (from upper left to lower right) present month-to-month annual rates of change in money. The entries in each row are rates of change from various initial months to a common terminal month. In each column the entries are the annual rates of change from a fixed initial month to the various terminal months.

Rates of change over any period within the limits of the table are presented. Initial and terminal dates may be selected in such a manner as to reduce distortions caused by irregular movements in the data. Points in time when there are marked and sustained changes in the rates of growth become relatively easy to locate.

Availability of Rate-of-Change Data

COMPOUNDED yearly rate-of-change triangles have been prepared for a number of economic time series and are available on request. The series include member bank reserves, money supply, bank credit, and selected business indicators (such as gross national product, retail sales, industrial production, employment, and prices).

Monthly rate-of-change data are available for most of the above mentioned series in this Bank's semi-monthly release, "Bank Reserves and Money." This release contains data similar to the diagonal entries of monthly rate-of-change triangles as well as the bottom row entries (see accompanying article, "Economic Expansion Has Moderated").

Requests for the releases containing these series may be addressed to the Research Department, Federal Reserve Bank of St. Louis, St. Louis, Missouri 63166.

Recent Economic Developments

Money Supply. Expansion of the nation's money supply (demand deposits adjusted plus currency held by the nonbank public) has been very uneven in recent months. Since the increase in the discount rate in November, alternating periods of expansion and contraction have resulted in a slower rate of expansion in money.

The money stock in May averaged $159.3 billion, a decrease of $1.2 billion from April, or an 8.6 per cent annual rate (Table I, lower right entry). Moving up the diagonal in Table I, this 8.6 per cent rate of decrease followed increases at a 5.4 per cent rate in each of the two preceding months. Moving further up the diagonal, a decrease in money at a 5.1 per

Table I

MONEY SUPPLY

Compounded Annual Rates of Change[1]

	1-64	2-64	3-64	4-64	5-64	6-64	7-64	8-64	9-64	10-64	11-64	12-64	1-65	2-65	3-65	4-65
2-64	.0															
3-64	1.6	3.1														
4-64	1.8	2.8	2.4													
5-64	1.4	1.8	1.2	.0												
6-64	2.8	3.6	3.7	4.4	8.9											
7-64	3.8	4.6	5.0	5.8	8.9	8.8										
8-64	3.8	4.5	4.7	5.3	7.2	6.3	3.9									
9-64	4.1	4.7	5.0	5.5	7.0	6.3	5.1	6.3								
10-64	4.2	4.7	4.9	5.4	6.5	5.9	4.9	5.5	4.6							
11-64	4.2	4.6	4.8	5.2	6.0	5.5	4.7	4.9	4.3	3.9						
12-64	4.0	4.4	4.5	4.8	5.5	5.0	4.2	4.3	3.6	3.1	2.3					
1-65	3.9	4.3	4.4	4.6	5.2	4.7	4.0	4.0	3.5	3.1	2.7	3.1				
2-65	3.2	3.5	3.5	3.6	4.0	3.4	2.6	2.4	1.7	1.0	.0	—1.1	—5.1			
3-65	3.3	3.6	3.6	3.8	4.1	3.6	3.0	2.9	2.3	1.8	1.3	1.0	.0	5.4		
4-65	3.5	3.7	3.8	3.9	4.2	3.8	3.3	3.2	2.7	2.4	2.1	2.1	1.8	5.4	5.4	
5-65	2.7	2.9	2.8	2.9	3.1	2.6	2.0	1.8	1.2	0.8	0.3	—0.1	—0.9	0.5	—1.9	—8.6

[1] Calculated from seasonally adjusted monthly averages of daily figures.

Table II

MONEY SUPPLY

Compounded Annual Rates of Change[1]

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
1948	0.4																
1949	—0.3	—1.0															
1950	0.7	0.8	2.6														
1951	1.6	2.0	3.5	4.5													
1952	2.3	2.8	4.0	4.8	5.0												
1953	2.3	2.7	3.6	4.0	3.7	2.5											
1954	2.2	2.5	3.2	3.4	3.0	2.0	1.6										
1955	2.3	2.6	3.2	3.3	3.0	2.4	2.3	3.1									
1956	2.2	2.4	2.9	3.0	2.7	2.1	2.0	2.2	1.2								
1957	2.0	2.2	2.6	2.6	2.3	1.8	1.6	1.6	0.9	0.6							
1958	2.0	2.1	2.5	2.4	2.2	1.7	1.5	1.5	1.0	0.9	1.2						
1959	2.1	2.2	2.5	2.5	2.3	1.9	1.8	1.8	1.5	1.6	2.2	3.2					
1960	1.8	1.9	2.2	2.1	1.9	1.5	1.3	1.3	0.9	0.9	1.0	0.9	—1.3				
1961	1.8	1.9	2.1	2.1	1.9	1.5	1.4	1.4	1.1	1.0	1.1	1.1	0.1	1.6			
1962	1.8	1.9	2.1	2.1	1.9	1.6	1.5	1.4	1.2	1.2	1.3	1.4	0.8	1.9	2.1		
1963	1.9	2.0	2.2	2.2	2.0	1.7	1.6	1.6	1.4	1.5	1.6	1.7	1.3	2.2	2.6	3.0	
1964	2.0	2.1	2.3	2.3	2.1	1.9	1.8	1.8	1.7	1.8	1.9	2.0	1.8	2.6	3.0	3.4	3.8

[1] Calculated from annual averages of daily figures.

Table III

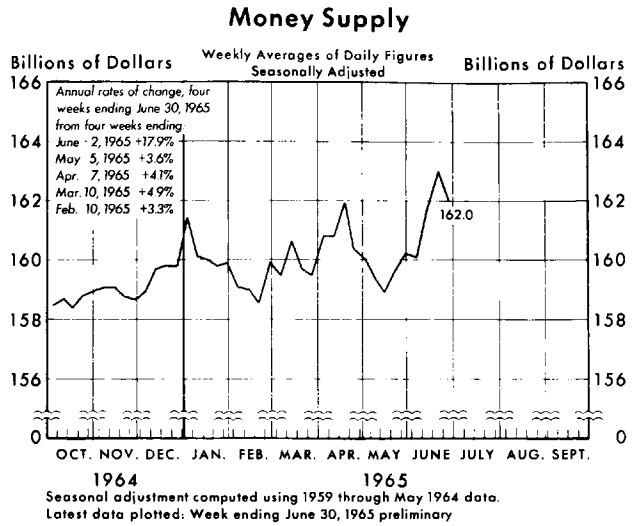
PAYROLL EMPLOYMENT

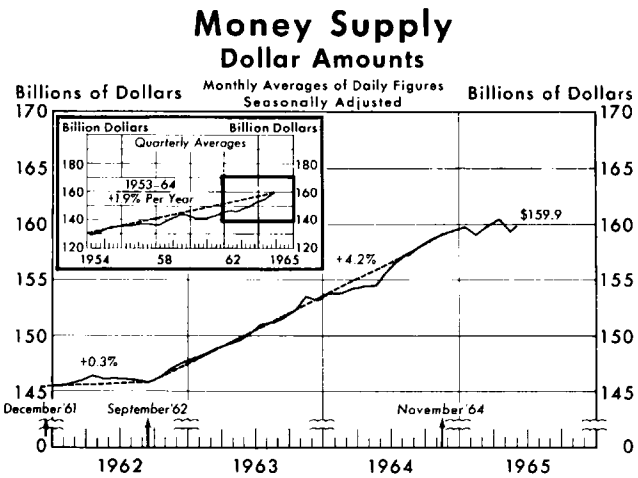
Compounded Annual Rates of Change[1]

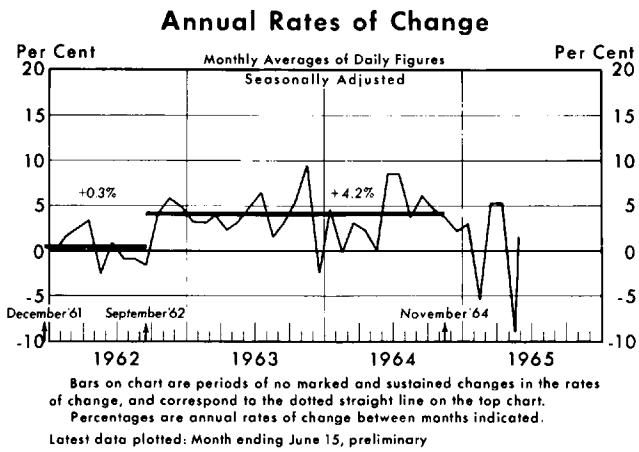
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
1948	2.3																
1949	—0.1	—2.5															
1950	1.0	0.4	3.3														
1951	2.2	2.2	4.6	5.8													
1952	2.2	2.1	3.7	3.9	2.0												
1953	2.3	2.3	3.5	3.6	2.5	2.9											
1954	1.6	1.5	2.3	2.0	0.8	0.2	—2.4										
1955	1.8	1.8	2.5	2.3	1.5	1.3	0.4	3.4									
1956	2.0	2.0	2.6	2.5	1.8	1.8	1.4	3.4	3.4								
1957	1.9	1.8	2.4	2.3	1.7	1.6	1.3	2.6	2.2	0.9							
1958	1.4	1.4	1.8	1.6	1.0	0.9	0.5	1.2	0.5	—1.0	—2.9						
1959	1.6	1.6	2.0	1.8	1.4	1.3	1.0	1.7	1.3	0.6	0.4	3.8					
1960	1.6	1.6	2.0	1.8	1.4	1.3	1.1	1.7	1.4	0.9	0.8	2.7	1.7				
1961	1.5	1.4	1.8	1.6	1.2	1.1	0.9	1.4	1.1	0.6	0.5	1.7	0.7	—0.4			
1962	1.6	1.5	1.8	1.7	1.4	1.3	1.1	1.6	1.3	1.0	1.0	2.0	1.4	1.2	2.8		
1963	1.6	1.6	1.9	1.8	1.4	1.4	1.2	1.6	1.4	1.1	1.2	2.0	1.5	1.5	2.4	2.0	
1964	1.7	1.6	1.9	1.8	1.5	1.5	1.3	1.7	1.6	1.3	1.4	2.1	1.8	1.8	2.5	2.4	2.7

[1] Calculated from annual averages of monthly figures.

cent rate from January to February offset increases during the two previous months. According to weekly data, money rose markedly in June.[1]







Over the whole November to May period money rose at a 0.3 per cent annual rate (Table I, bottom entry, November column).[2] Taking into consideration the above mentioned increase in June, money rose from November to the four weeks ending June 30 at a 2.6 per cent annual rate. By comparison, money rose at a 4.2 per cent annual rate from January 1964 to November 1964 (January 1964 column, November 1964 row), continuing the rate of expansion which prevailed from September 1962 to January 1964. Over a much longer period, 1951 to 1964, money expanded at an average annual rate of 2.1 per cent (Table II, 1951 column, 1964 row).

Bank Credit. Total bank loans and investments have continued to increase sharply since April but less rapidly than earlier. Because of problems associated with short-term analysis of data discussed above, this change should be interpreted cautiously. Total commercial bank credit rose at a 7.8 per cent rate from April to May, and preliminary data indicate a 6.7 per cent rate of increase from May to June. The increases in the last two months compare with an 11.9 per cent annual rate of expansion in the five months ending with April.

The slight reduction in the rate of total bank credit expansion since April has reflected primarily a more rapid decrease in bank holdings of U. S. Government securities and a slower rate of acquisition of municipal bonds and other securities.

Through June business loans outstanding at commercial banks continued to grow at about the rapid 20 per cent annual rate which has prevailed since last fall. Over a longer period (since 1952) business loans have risen at an average annual rate of 7.4 per cent.

Interest Rates. Yields on short-term U. S. Government securities have declined from the levels reached in late February. After last November, when the discount rate on member bank borrowings from Reserve Banks was marked up from 3½ per cent to 4 per cent, most short-term rates, including those on Treasury bills, rose. Yields on 90-day Treasury bills averaged 3.99 per cent in the last week of February, 38 basis points higher than in the week prior to the increase in the discount rate last November. Subsequent to late February, yields moved down to around the 3.80 per cent level in June. Yields on six-month

[1] This Bank issues a release, "Weekly Financial Data," which includes the weekly money supply figures. Names can be added to the mailing list by writing the Research Department, Federal Reserve Bank of St. Louis, St. Louis, Missouri, 63166.

[2] New seasonal adjustment factors currently are being computed for money, and it appears possible that when the new factors are applied to the period since November there will be a slightly greater expansion in money.

bills have also drifted downward during the last four months (Table IV).

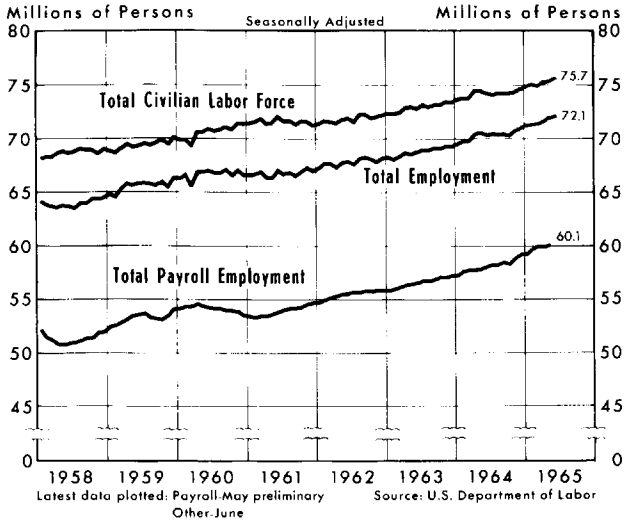
In contrast to the general decline during recent months in yields on short-term Government securities, interest rates on some other important types of short-term debt instruments have remained steady or have risen (Table IV). In early March interest rates on four- to six-month prime commercial paper reached 4.38 per cent, and rates on three- to six-month finance company paper reached 4.25 per cent; these rates have remained unchanged since then. Interest rates on 90-day bankers' acceptances in June were at 4.25 per cent, the same as in late April. Secondary market rates paid on 90-day negotiable certificates of deposit rose from 3.99 per cent in November to 4.33 per cent in June, continuing an upward trend which started in mid-1964.

Yields on long-term debt instruments have been virtually unchanged since the end of last year. In June the yield on long-term Government bonds was 4.14 per cent; on high-grade corporate bonds, 4.46 per cent; and on Aaa rated state and local government bonds, 3.14 per cent.

Business Activity. Since February, there has been a marked slowing in the rate of economic advance from the rapid pace experienced earlier. At the same time wholesale prices have risen, whereas they had been nearly stable for a prolonged period.

Payroll employment increased at a 2.6 per cent rate from February to May, compared with a 5.0 per cent rate of gain from last September to February. The number of people of working age (18-64) has been rising at about a 1.6 per cent per year rate. Payroll employment rose at an average annual rate of 1.5 per cent from 1951 to 1964 (Table III, 1951 column, 1964 row). From Tables II and III the following breakdowns of the average growth rates for money and employment can be obtained readily:

Status of the National Labor Force



Period	Annual Rates of Growth: Money Supply	Annual Rates of Growth: Payroll Employment
1951-1953	3.7	2.5
1953-1954	1.6	—2.4
1954-1956	2.2	3.4
1956-1958	0.9	—1.0
1958-1959	3.2	3.8
1959-1961	0.1	0.7
1961-1964	3.0	2.5
Average 1951-1964	2.1	1.5

Table IV

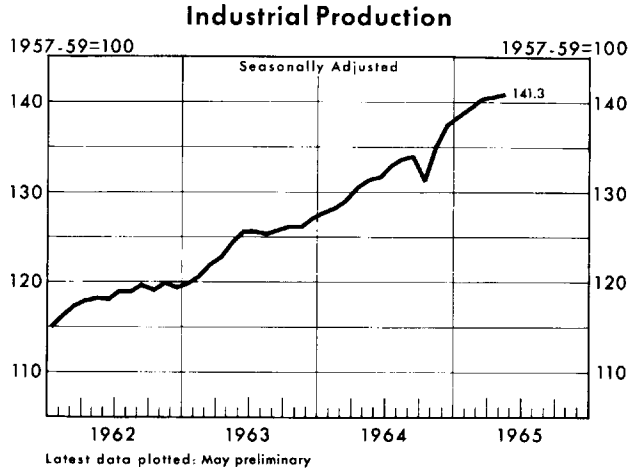
SELECTED INTEREST RATES

Averages of Daily Figures
(Per Cent Per Annum)

		Prime Commercial Paper 4 to 6 mos.	Finance Company Paper Placed Directly 3 to 6 mos.	Prime Bankers' Acceptances 90 Days	U. S. Government Securities (Taxable): 3-Mo. Bills	U. S. Government Securities (Taxable): 6-Mo. Bills	U. S. Government Securities (Taxable): Long-Term Bonds	Corporate Bonds Aaa	C.D.'s Secondary Market Rate[1]	State & Local Govt. Bonds Aaa	Conventional First Mortgages
1964	Nov.	4.02	3.89	3.79	3.64	3.81	4.12	4.43	3.99	3.08	5.75
	Dec.	4.17	3.98	4.00	3.84	3.94	4.14	4.44	4.16	3.01	5.76
1965	Jan.	4.25	4.05	4.00	3.81	3.94	4.14	4.43	4.11	2.97	5.79
	Feb.	4.27	4.12	4.10	3.93	4.00	4.16	4.41	4.20	2.97	5.79
	Mar.	4.38	4.25	4.15	3.93	4.00	4.15	4.42	4.28	3.09	5.72
	Apr.	4.38	4.25	4.19	3.93	3.99	4.15	4.43	4.30	3.09	5.74
	May	4.38	4.25	4.25	3.89	3.95	4.14	4.44	4.31	3.09	5.74p
	June[2]	4.38	4.25	4.25	3.81	3.87	4.14	4.46	4.33	3.14	5.74

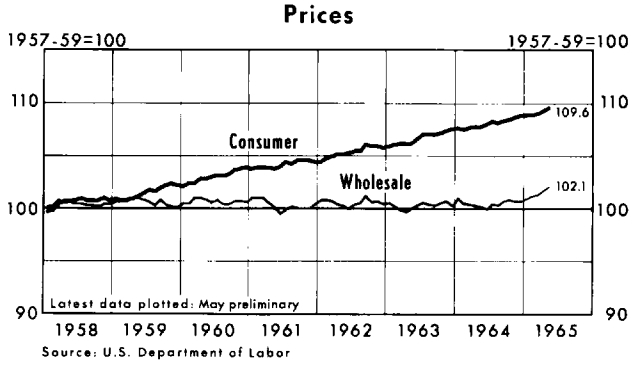
[1] Negotiable time certificates of deposit at commercial banks.
[2] Estimated.
p—Preliminary.

Industrial production has risen at a 6.3 per cent rate since February, compared with a 9.1 per cent rate from September to February. Since 1961, industrial production has risen at an average 6.3 per cent rate, and, since 1951, it has increased at an average 3.8 per cent rate.



Retail sales rose at an average 2.6 per cent annual rate from February to May, a decline from February to April being more than offset by a jump from April to May. By comparison, retail sales rose at an 11.5 per cent annual rate from last September to February. Since 1961, retail sales have risen at an average 6.1 per cent rate and, since 1951, at an average 4.0 per cent rate.

Prices have inched up in recent months. From February to May wholesale prices increased at a 3.6 per cent annual rate. From last September to February they rose at a 1.2 per cent rate. By contrast, wholesale prices were virtually unchanged on balance from 1958 to 1964. Consumer prices have also been moving up at a faster rate since February (about 2.6 per cent rate) than from last September to February (1.1 per cent rate).



Employment Growth in the Central Mississippi Valley

PAYROLL EMPLOYMENT INCREASED in each of five Central Mississippi Valley states in early 1965. In the aggregate, employment in the five states rose at an annual rate of 3.4 per cent from December to April, compared with a 3.7 per cent rate nationally.[1]

Arkansas. Payroll employment in Arkansas increased at a 3.8 per cent annual rate from December to April to a level nearly 27 per cent above the 1957-59 average. By comparison, employment nationally in April was about 14 per cent above the 1957-59 average.

Kentucky. From December to February employment rose in Kentucky, but from February to April it drifted lower. On balance, employment rose at a 3.1 per cent average rate from December to April. In April employment in Kentucky was 18 per cent above the 1957-59 average, compared with the national gain of 14 per cent.

Mississippi. Employment has expanded markedly since December in the State of Mississippi. From December to April payroll employment grew at a 5.6 per cent annual rate. The April figure was about 25 per cent above the 1957-59 average, compared with the 14 per cent gain nationally.

Missouri. Payroll employment in Missouri rose at a 2.8 per cent annual rate from December to April. Since 1961, employment in Missouri has risen at an average 2.1 per cent rate, compared with the 2.9 per cent rate nationally.

Tennessee. From December to January employment rose sharply in Tennessee but, since January, has changed little. From December to April employment rose at an average rate of 2.5 per cent. In April employment was nearly 23 per cent above the 1957-59 average as against the 14 per cent gain for the entire United States.

[1] Current figures on payroll employment for five states in the Mississippi Valley are available in the monthly release "Selected Economic Indicators," which is available from the Research Department, Federal Reserve Bank of St. Louis, P. O. Box 442, St. Louis, Missouri 63166.